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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/916,433 | 07/30/2001 | Kosuke Yamamoto | 35.C15630 | 8915 |

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| EXAMINER |
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MILIA, MARK R

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| ART UNIT | PAPER NUMBER |
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2622

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,433

Applicant(s)

YAMAMOTO ET AL.

Examiner

Mark R. Milia

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon application number 398978/2000, filed in Japan on 12/27/00. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.
2. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon application number 231125/2000, filed in Japan on 7/31/00.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "1501" has been used to designate both an "Operation Unit" and a "Graphic Controller". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 1, reference character (2000), Fig. 3, reference characters (31) and (33), Fig. 6, reference characters (S604) and (S606), Fig. 10, reference character (210), and Fig. 14, reference character (1410). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 12 is drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

“Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.”

“Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure’s functionality to be realized.”

Claim 12, while defining a computer program, does not define a “computer-readable medium” and is thus non-statutory for that reason. A computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. Amending the claim to embody the program on “computer-readable medium” would make the claim statutory.

“In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.” - MPEP 2106.IV.B.1(a)

Examiner suggests canceling claim 12 in view of claim 11. Claim 11 includes a program on a computer-readable medium with identical claim limitations as that of claim 12.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7, and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5579447 to Salgado.

Regarding claims 1, 10, 11, and 12, Salgado discloses an information processing system for forming print data to be printed by a printing apparatus, comprising: obtaining means for obtaining draw information based on a print document which is formed by an application (see column 6 lines 5-12 and column 6 line 61-column 7 line 14), setting means for setting print set information at the time of executing a printing process of the print data by said printing apparatus (see column 7 lines 1-14), and estimating means for estimating a print time which is required for the printing process on the basis of the draw information obtained by said obtaining means and the print set information set by said setting means (see Figs. 9 and 10, column 7 lines 23-35 and 46-56, column 8 lines 7-24, column 8 line 31-column 9 line 5, column 10 lines 54-57, and column 11 lines 19-30).

Regarding claim 13, Salgado discloses an information processing apparatus for forming print data to be printed by a printing apparatus, comprising: obtaining means for obtaining draw information based on a print document which is formed by an application

Art Unit: 2622

(see column 6 lines 5-12 and column 6 line 61-column 7 line 14), estimating means for analyzing the draw information which is obtained by said obtaining means and estimating a print time which is required for a printing process of said draw information for a plurality of print modes (see Figs. 9 and 10, column 7 lines 23-35 and 46-56, column 8 lines 7-24, column 8 line 31-column 9 line 5, column 10 lines 54-57, and column 11 lines 19-30), and display control means for allowing the print time estimated by said estimating means to be displayed in correspondence to each of said print modes (see Figs. 9 and 10, column 6 line 61-column 7 line 14, column 8 line 31-column 9 line 5, and column 9 line 59-column 10 line 13).

Regarding claim 3, Salgado discloses the system discussed in claim 1, and further discloses wherein said print set information is information regarding print quality in said print data (see column 7 lines 9-14).

Regarding claim 4, Salgado discloses the system discussed in claim 1, and further discloses wherein said print set information includes information regarding print quality in said print data and information regarding a print layout (see column 7 lines 9-14).

Regarding claim 5, Salgado discloses the system discussed in claim 1, and further discloses an informing means for informing the user of the print time which is estimated by said estimating means before the print data is formed (see Figs. 2 (114) and 10, column 9 line 59-column 10 line 13, column 10 lines 54-57, and column 11 lines 19-30), and forming means for forming the print data based on said print document after

the print time was informed by said informing means (see Fig. 1 (20), column 3 lines 14-32, column 6 lines 61-66, column 7 lines 46-56, and column 10 lines 26-43).

Regarding claim 6, Salgado discloses the system discussed in claim 5, and further discloses wherein said informing means provides said print time and a user interface for promoting an input of an instruction to execute the printing process which requires said print time (see Figs. 2 and 10, column 7 lines 1-22, and column 9 lines 59-63).

Regarding claim 7, Salgado discloses the system discussed in claim 5, and further discloses wherein the user interface which is informed by said informing means accepts the input of the instruction for canceling the execution of the printing process which requires said print time (see column 11 lines 19-30, reference states that after a user ascertains the estimated time to complete a print job, the user may modify or delete the print job, which is analogous to the claim limitation).

Regarding claim 9, Salgado discloses the system discussed in claim 1, and further discloses a transmitting means for transmitting said print data to said printing apparatus through a network (see column 9 lines 32-63).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 8, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salgado as applied to claims 1 and 13 above, and further in view of U.S. Patent No. 6891632 to Schwartz.

Regarding claim 2, Salgado discloses wherein said obtaining means obtains the draw information including an ID of every object constructing said print document before the execution of the print (see column 8 lines 11-19).

Salgado does not disclose expressly wherein said obtaining means obtains the draw information through an expansion API provided between a printer driver and said application.

Schwartz discloses wherein said obtaining means obtains the draw information through an expansion API provided between a printer driver and said application (see column 1 lines 38-46).

Salgado & Schwartz are combinable because they are from the same field of endeavor, estimating print time.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the API provided between a printer driver and an application as described by Schwartz with the system of Salgado.

The suggestion/motivation for doing so would have been to provide a data stream for printing that can be supplied to a device driver to drive the printer. An API is well known and used in the art as generic interfaces between an application program, the operating system, and a device driver (see column 1 lines 16-63 of Schwartz).

Therefore, it would have been obvious to combine Schwartz with Salgado to obtain the invention as specified in claim 2.

Regarding claim 8, Salgado does not disclose expressly wherein said setting means sets a print profile obtained by collecting a plurality of print set information at the time of executing the printing process of the print data by said printing apparatus, and said estimating means estimates the print time which is required for the printing process every plural print profiles which are set by said setting means.

Schwartz discloses wherein said setting means sets a print profile obtained by collecting a plurality of print set information at the time of executing the printing process of the print data by said printing apparatus, and said estimating means estimates the print time which is required for the printing process every plural print profiles which are set by said setting means (see column 5 line 47-column 6 line 63, column 7 lines 11-15, column 9 lines 13-16, and column 10 lines 19-26).

Regarding claim 15, Salgado does not disclose expressly a discriminating means for analyzing the draw information which is obtained by said obtaining means and discriminating a proper print mode from said plurality of print modes, and wherein said display control means allows a message for recommending the print mode discriminated by said discriminating means to be displayed.

Schwartz discloses a discriminating means for analyzing the draw information which is obtained by said obtaining means and discriminating a proper print mode from said plurality of print modes, and wherein said display control means allows a message

for recommending the print mode discriminated by said discriminating means to be displayed (see column 5 line 47-column 6 line 63, column 7 lines 11-15, and column 9 lines 13-16).

Regarding claim 16, Salgado does not disclose expressly wherein said discriminating means discriminates the proper print mode on the basis of a ratio of color data of the draw information.

Schwartz discloses wherein said discriminating means discriminates the proper print mode on the basis of a ratio of color data of the draw information (see column 7 line 40-column 8 line 4).

Salgado & Schwartz are combinable because they are from the same field of endeavor, estimating print time.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the plurality of print modes and the correct selection of a print mode, especially on the basis of color as described by Schwartz with the system of Salgado.

The suggestion/motivation for doing so would have been to provide the shortest printing time using the optimum strategy for printing including considering printing speed, image quality, and user preferences. Proper selection will lead to faster printing (see abstract, column 1 lines 9-14, and column 5 lines 57-61 of Schwartz)

Therefore, it would have been obvious to combine Schwartz with Salgado to obtain the invention as specified in claims 8, 15, and 16.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salgado as applied to claim 13 above, and further in view of U.S. Patent No. 6816270 to Cooper et al.

Salgado discloses a display (see Fig. 2 and column 7 lines 1-22).

Salgado does not disclose expressly wherein said display control means allows a button for displaying a preview image for confirming an image quality to be displayed in correspondence to said plurality of print mode.

Cooper discloses wherein said display control means allows a button for displaying a preview image for confirming an image quality to be displayed in correspondence to said plurality of print mode (see Fig. 4, column 2 lines 57-58, column 6 lines 16-21 and 35-42, and column 7 lines 7-28).

Salgado & Cooper are combinable because they are from the same field of endeavor, processing and execution of print data.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the print preview aspect of Cooper with the system of Salgado.

The suggestion/motivation for doing so would have been to avoid printing multiple copies of a document in the case the output does not coincide correctly with the input and to thereby reduce paper consumption (see column 1 lines 15-45 of Cooper).

Therefore, it would have been obvious to combine Cooper with Salgado to obtain the invention as specified in claim 14.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show the state of the art refer to U.S. Patent numbers 6661530 (Munetomo et al.), 6519049 (Nagasaka), 6847466 (Gazdik et al.), 5727135 (Webb et al.), 5913018 (Sela), and 6678068 (Richter et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached at (571) 272-7402. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark R. Milia
Examiner
Art Unit 2622

MRM

JOSEPH R. POKRZYWA
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